GOVERNMENT STATUS REPORT OF JAPAN

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ABSTRACT

The situation of road traffic accidents in Japan remains serious. In order to tackle the situation, Japan has been actively implementing initiatives to improve motor vehicle safety such as the establishment and revision of safety regulations, new car assessment program (NCAP), the promotion of advanced safety vehicle (ASV) and its practical application. Japan has also been promoting activities to facilitate the international harmonization of motor vehicle regulations and the mutual recognition of certification.

Trends of the Road Traffic Accidents in Japan

Annual road traffic fatalities have been decreasing since 1992; 7,358 people were killed (on a 24-hour basis) in the traffic accidents in 2004. However, that year recorded the worst ever in the number of traffic accidents and its casualties, which reaches to 951,371 and 1,181,585, respectively. These figures indicate that the situation of the road traffic accident is still serious.

By analyzing recent traffic accident statistics, we can find the following characteristics in Japan;

- the death toll of elderly people above age 65 is shifting at a high rate, making up about 40 percent of all fatalities
- rear-end collision is the most common type of accident and its rate is still rising
- automobile occupants accounted for the largest number of fatalities, but its rate is decreasing recently; while pedestrians accounted for the second largest number and its rate is increasing

Initiatives for Improving Motor Vehicle Safety

-Basic Approach

Based on Prime Minister's statement in 2004 'to halve the annual traffic accident fatalities (5,000) in a decade', Japan's Ministry of Land, Infrastructure and Transport (MLIT) makes an effort to improve vehicle safety.

The Ministry undertake comprehensive consideration process by the vehicle traffic safety measure cycle (investigation and analysis of accidents, implementation of measures and evaluation of results) so as to further expand its portfolio of road traffic accident countermeasures, using a scientific methodology based on accident analysis.

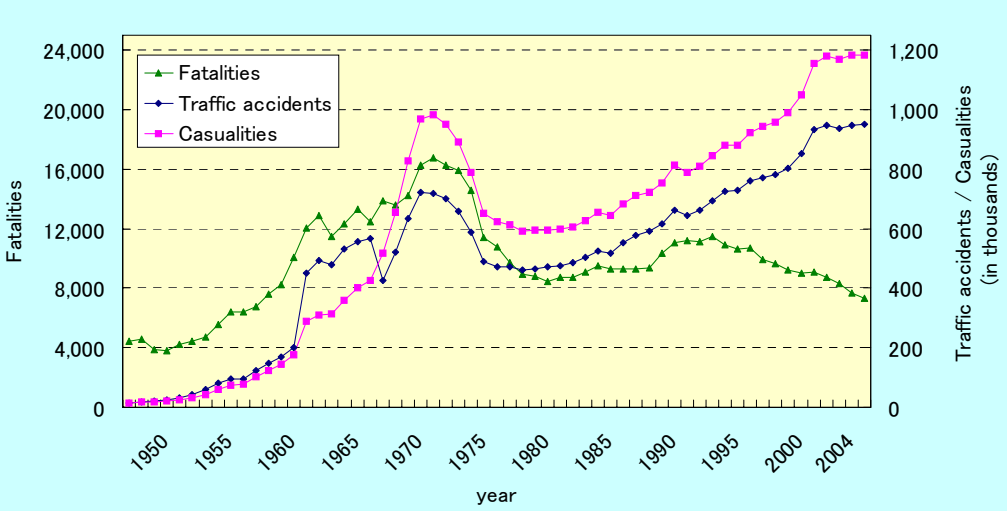


Figure 1. Trends of Traffic Accidents and its Fatalities / Casualties in Japan

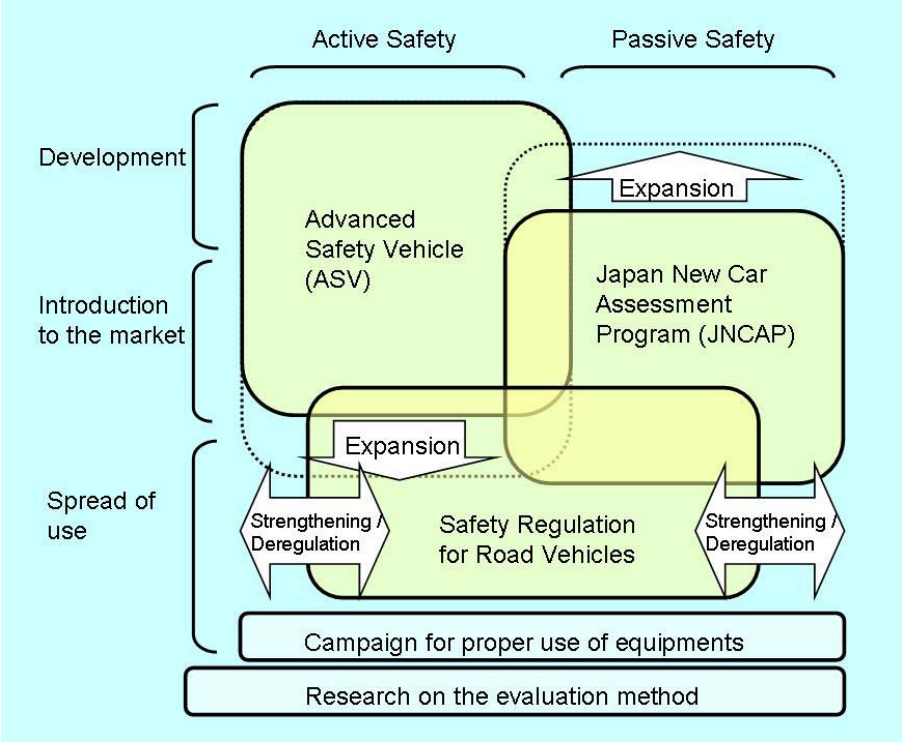


Figure 2. Variation of Safety Measures

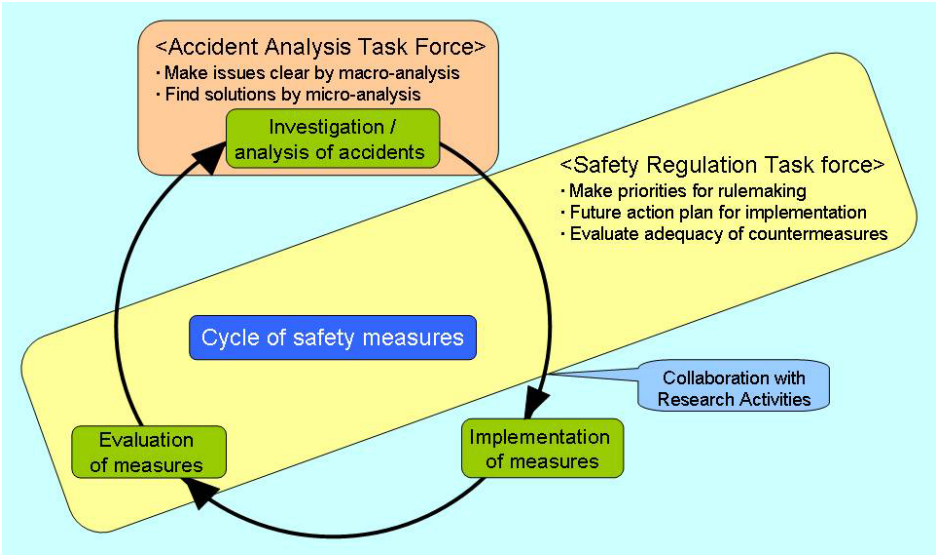


Figure 3. Framework for the Cycle of Safety Measures

This cycle is carried out in close relation with two task forces composed of a group of experts outside the Ministry; one is for accident analysis and another is for implementation and evaluation of countermeasures. In Accident Analysis Task Force, various kinds of accident-related data, both microscopic and macroscopic, are gathered and analyzed. Much of those data are maintained by the Institute for Traffic Accident Research and Data Analysis (ITARDA), an organization established in 1992 for analyzing traffic accident data. In Safety Regulation Task Force, the action plan for implementing rulemaking priorities, non-regulatory approach, research promotion, etc. Evaluation of the adequacy of measures is also discussed in this task force.

In addition, the Ministry conducts Automotive Safety Symposium annually in order to secure the transparency of the above mentioned process on vehicle safety measures. Such topics as safety

measures for elderly people and Advanced Safety Vehicle technologies for heavy trucks are discussed in recent symposiums.

- Establishment / Revision of Safety Regulations

The Ministry has strengthened the regulation of the driver's field of vision, entering into force from January, 2005, and introduced pedestrian protection regulation for passenger vehicles, entering into force from September, 2005. The regulation for offset frontal collision, adding on a current regulation for full-lap collision, and the regulation of seat belt reminders have also promulgated in March 10, 2005. Concerning fuel cell vehicles powered by compressed hydrogen, the Ministry established safety regulation for those vehicles.

- New Car Assessment Program (NCAP)

Since 1996, the Ministry conducts the assessment tests of vehicle safety and its evaluation in collaboration with National Agency for Automotive Safety and Victims' Aid (NASVA). More specifically, collision safety performance tests and braking performance tests have been undertaken. In addition, pedestrian head protection performance tests have been added since 2003. Concerning the collision safety performance tests, three tests (full-lap frontal collision tests, offset frontal collision tests and side collision tests) are held respectively. Points are calculated, based on the criteria for each test, and overall rating is reported by adding up the total and rating the total points in stars (one to six).

In addition to NCAP, the Ministry has conducted the assessment tests for the child seats (frontal collision tests and usability tests).

- Promotion of Developing / Disseminating New Vehicle Technology and its Practical Application

The Ministry has been promoting Advanced Safety Vehicle (ASV) project since 1991, seeking to commercialize ASV technologies, by early 21st century. ASV features highly intelligent electronic functions to enhance safety level significantly, and the project is promoted through the study group and its committees, composed of governments, academics and industries.

Up to now, several ASV technologies, like

Table 1. Items of safety measures under consideration in Japan

Area	Candidates for Future Vehicle Safety Regulation	Items Decided to Undertake Rulemaking Proceeding	Establish WG for further study	Further Study
Seat Belt / CRS	Seat Belt Reminder System Alerting with Sound and Light	× (published in March, 2005)		
	Three-point Seat Belts for Center Rear Passenger			×
	ISO-FIX CRS	×		
Safety for Vulnerable Road-Users	Improved Body Structure for Mitigating Pedestrian Leg Injury	× (following gtr work)		
	Brake Assist		×	
Crash Worthiness	Vehicle Compatibility		×	
	Neck Injury Mitigation Seat / Active Headrest		×	
	Occupant Protection in Side-into-pole Crashes			×
	Occupant Protection in Interior Fittings			×
Heavy-duty Vehicles	Occupant Protection in Full-lap Frontal Crashes			×
	Front Under-run Protection Device	×		
	Retarder / EBS			×
Control Stability	Stability Control System			×
	ABS			×

collision mitigation system and lane-keeping assistance system, are commercialized. We are trying to introduce ASV technologies not only into passenger cars, but also into other types of vehicles including heavy-duty trucks.

The project is now in the last year of third phase (2001-2005); aiming mainly for two tasks. First task is to continue research and development to introduce communication technologies into ASVs, and the second task is to study the ways of promoting widespread use of ASVs in the market.

The International Harmonization of Motor Vehicle Regulations and Promotion of the Mutual Recognition of Certification

In recent years, there have been great changes in the international situation regarding motor vehicles. It is due to the growth of international distribution of motor vehicles and parts, as well as the globalization of vehicle and parts manufacturers and the rapid advance to have a common specifications and modularization of vehicle components. As a result, there are growing needs to harmonize regulations, and following variety of efforts have undertaken related to motor vehicle regulation and certification.

- Activities in the World Forum for the Harmonization of Vehicle Regulations (UN/ECE/WP29)

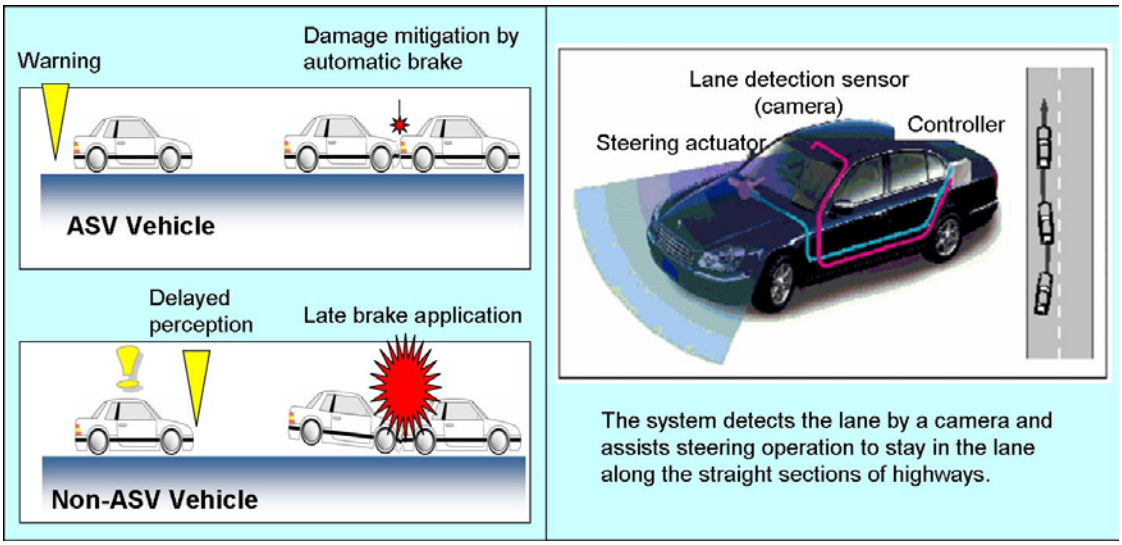
Japan has been contributing actively to the United Nations Economic Commission for Europe, the world forum for the harmonization of vehicles regulations (ECE/WP29), which is carrying out activities leading to the harmonization and integration of regulations. Japan contributes to international harmonization as one of major parties taking initiatives of the forum.

Especially for the Intelligent Transport System (ITS), an ITS informal group is established in WP29 in June 2002 and started its activities towards the common understanding of how to deal with ITS at WP29, with exchanging views. Japan becomes the co-chairman of this informal group, and is actively contributing for the group.

- Encouragement of the Mutual Recognition of Certification

After the accession to the 1958 Agreement in November 1998, Japan has promoted international harmonization of automotive regulations and has made an effort to apply more UN/ECE Regulations. At present, Japan applies or harmonizes 30 ECE Regulations and another 9 Regulations are in the process of application, soon to be harmonized.

Japan will keep working on applying regulations step by step and actively proposing to amend regulations to apply them, taking into consideration domestic and international demands for harmonization and their economical effects, while Japan continues to commit to keep levels of Japanese safety and environmental regulations. Japan is also endeavoring to invite more countries, particularly Asian countries, to join the activity of WP29.



(Damage Mitigation Brake) **(Lane-keeping Assistance System)**

Figure 4. Example of ASV Technologies

- Encouragement of the Formulation of 'gtr's

Japan currently takes a leading role in developing new gtrs under 1998 agreement. Japan is playing an active part in the establishment of gtr, together with U.S. and Europe. Japan has contributed by chairing or participating as a drafter in meetings' discussing issues, in particular common issues (vehicle classification, masses and dimensions), pedestrian safety, heavy-duty OBD and passenger vehicle brakes.

In the discussion of pedestrian safety gtr, in particular, there is close relationship with International Harmonization Research Activities (IHRA), which provides scientific knowledge from the research side.

Table 5. UN/ECE regulations Japan applies

ECE regulations Japan has already applied (30*)

3	6	7	11	12
13-H	17	19	23	25
26	27	28	30	38
39	45	48	54	58
62	75	77	81	91
94*	95	104	116	119

* Japan has hot applied ECE R94, but the technical requirements of offset test are identical.

ECE regulations Japan is in the process of making / amending domestic regulation for harmonization (9)

ECE 10	Electromagnetic Compatibility
ECE 14	Safety-belt Anchorages
ECE 37	Filament Lamp
ECE 61	External Projections (for commercial vehicles)
ECE 70	Rear Marking Plates
ECE 80	Seat of Large Passenger Vehicles
ECE 85	Measurement of Net Power
ECE 93	Front Under-run Protection
ECE 113	Headlamps (with symmetrical beam)